L 10360-67 EWP(j)/EWT(m) RM

ACC NR: AP7003108 SOURCE CODE: UR/0079/66/036/007/1240/1243

AUTHOR: Zemlyanskiy, N. I.; Chernaya, N. M.; Turkevich, V. V.; Krasnoshchek, V. I.

ORG: L'vov State University (L'vovskiy gosudarstvennyy universitet)

TITLE: Esters of selenothiophosphoric acid. III. Mixed esters of 0,0-dialkyl-(aryl)selenothiophosphoric acid

SOURCE: Zhurnal obshchey khimii, v. 36, no. 7, 1966, 1240-1243

TOPIC TAGS: organoselenium compound, ester, organic synthetic process, phosphoric acid, IR spectroscopy, chromatography

ABSTRACT: The authors synthesized for the first time the potassium salt of 0,0-diethylselenothiophosphoric acid and investigated its reactions with alkylating agents: alkyl bromides, alkenes, and alkynes. Reaction of the potassium salt with certain alkyl bromides yielded new mixed esters of 0,0-diethylselenothiophosphoric acid, the reaction proceeding at the selenium atom. The methods of infrared spectroscopy and thin-layer chromatography indicated that the alkylation of the potassium salt results in the formation primarily of the thione isomer. This was confirmed by synthesizing the isomeric propyl and isoamyl esters of 0,0-diethylselenothiophosphoric acid with a thiol structure by the reaction of 0,0-diethylchloroselenophosphate with potassium mercaptides. Mixtures of the isomers were obtained, and their formation was interpreted as a partial rearrangement of the thione isomer to the thiol isomer during its isolation. Orig. art. has: 1 figure, 2 formulas and 1 table. [JPRS: 38,970]

SUB CODE: 07 / SUBM DATE: 17May65 / ORIG REF: 005 / OTH REF: 002

UDC: 547.26'118

Card 1/1 0925 2064

ZEMLYANSKIY, N.I.; MURAV'YEV, I.V.

Reaction of phosphorus pentasulfide with alcohols in the presence of bases. Dokl. AN SSSR 163 no.3:654-655 Jl '65. (MIRA 18:7)

1. L'vovskiy gosudarstvennyy universitet im. Iv.Franko. Submitted January 11, 1965.

ZEMLYANSKIY, N.I.; GLUSHKOVA, L.V.

Synthesis of unsaturated esters of O,O-dialkyldithiophosphoric acids. Zhur. ob. khim. 35 no.8:1481-1483 Ag '65.
(MIRA 18:8)

1. L'vovskiy gosudarstvennyy universitet.

ACCESSION NR: AP4021979 S/0073/64/030/002/0190/0194

AUTHOR: Zemlyanskiy, N. I.; Turkevich, V. V.; Murav'yev, I. V.; Bary*lyuk, V. V.

TITLE: Spectral characteristic of the P=S bond in certain dithiophosphates

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 30, no. 2, 1964, 190-194

TOPIC TAGS: vibrational spectrum, IR spectrum, dithiophosphate, phosphorus sulfur double bond, alkyldithiophosphate, acyldithiophosphate, acyldithiophosphate, frequency shift, phosphorus sulfur bond frequency, spectral analysis

ABSTRACT: The vibrational spectra of a number of dithiophosphates were studied to determine the possibility of applying such physical methods to the determination of molecular structures of these phosphorus organic compounds. The IR spectra in the 400-2400 cm^{-1} region of a series of alkyl and acyl derivatives of dithiophosphoric acid were examined; the position of the frequency of the P=S vibrations in these compounds was determined to be in the 640-680 cm^{-1} range. The additional environment of the P atom affects the vibration of the P=S bonds. The more electropositive the C atom bound to the S, the greater is the shift (up to

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ACCESSION NR: AP4021979

about 30 cm^{-1}) of the P.S frequency to the long waves. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: L'vovskiy gosudarstvenny*y universitet im. I. Franko (Lvov State University)

SUBMITTED: 28Feb63 DATE ACQ: 09Apr64 ENCL: 00

SUB CODE: PH NO. REF. SOV: 010 OTHER: 009

Card 2/2

ZEMLYANSKIY, N.I.; TURKEVICH, V.V.; MURAV'YEV, I.V.; BARYLYUK, V.V.

Spectral characteristics of the P=S bond in some dithiophosphates. Ukr.khim.zhur. 30 no.2:190-194 '64. (MIRA 17:4)

1. L'vovskiy gosudarstvennyy universitet imeni I.Franko.

ZEMLYANSKIY, N. I.; KLIMOVSKAYA, L. K.[deceased]; GALIBEY, V. I.; DRACH, B. S.; MURAV'YEV, I. V.; TURKEVICH, V. V.

Synthesis of some derivatives of esters of O,O'-dialkylphosphorodithioic acids and their infrared spectra. Zhur. ob. khim. 32 no.12:4066-4069 D '62. (MIRA 16:1)

1. L'vovskiy gosudarstvennyy universitet.

(Phosphorodithioic acid--Spectra)

ZEMLYANSKIY, N.I.; DRACH, B.S.; prinimali uchastiye: GOLECHEK, A.A.; YURZHENKO, S.A.

Synthesis of salts of some O,O-diaryldithiophosphoric acids. Zhur.-ob.khim. 32 no.6:1962-1966 Je '62. (MIRA 15:6)
(Phosphorodithioic acid)

ZEMLYANSKIY, N.I.; DRACH, B.S.

Complexometric determination of phosphorus. Zhur.anal.khim. 16 no.5:653-654 S-O '61. (MIRA 14:9)

1. Franko L'vov State University.
(Phosphorus--Analysis)

ZEMLYANSKIY, N.I.; PRIB, O.A.; DRACH, B.S.

Reaction of potassium O,O-dialkyldithiophosphates with aromatic sulfonyl chlorides. Zhur. ob. khim. 31 no.3:880-883 Mr '61. (MIRA 14:3)

1. L'vovskiy gosudarstvennyy universitet.
(Sulfonyl chloride) (Phosphorodithioic acid)

5.3630

77893
SOV/79-30-2-44/78

AUTHORS: Olifirenko, S. P., Zemlyanskiy, N. I., Lylyk, A. M.

TITLE: Synthesis of Acyl Derivatives of O,O-Dibutylthiophosphoric Acid

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 2, pp 579-580 (USSR)

ABSTRACT: The synthesis proceeds in the following stages: (1) synthesis of dibutylphosphite; (2) obtaining sodium dibutylphosphite; (3) synthesis of O,O-dibutylthiophosphate; (4) synthesis of acyl derivatives of O,O-dibutylthiophosphoric acid. Since the synthesis of sodium O,O-dibutylthiophosphate was not previously described in literature, it is given below. Metallic sodium in absolute benzene was stirred with O,O-dibutylphosphorous acid under water-free conditions. After 20 hr excess sodium was removed, and powdered sulfur was added in small portions with vigorous stirring and cooling. After addition, the mixture was heated for 30 min at 60° C

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Synthesis of Acyl Derivatives of O,O-Dibutyl-thiophosphoric Acid

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SOV/79-30-2-44/78

and benzene was removed by distillation until crystals started to form. Final removal of benzene and crystallization were done under reduced pressure. Acyl derivatives of O,O-dibutylthiophosphoric acid were obtained by treating the sodium salt with acid chlorides of benzoic, succinic, glutaric, and adipic acids. Results of the reaction and some physical constants are given in the following table:

Acylation of Sodium O,O-Thiophosphate With Acid Chlorides

FORMULA OF ACYL DERIVATIVE	YIELD (%)	n_D^{21}	d_4^{21}
$(C_4H_9O)_2PSOCOC_6H_5$	41.0	1.5015	1.066
$(C_4H_9O)_2PSOCO(CH_2)_2COOSP(C_4H_9O)_2$	35.4	—	1.466
$(C_4H_9O)_2PSOCO(CH_2)_3COOSP(C_4H_9O)_2$	78.0	—	1.158
$(C_4H_9O)_2PSOCO(CH_2)_4COOSP(C_4H_9O)_2$	20.5	—	1.1192

There are 1 table; and 10 references, 1 Polish, 8 Soviet, 1 U.S. The U.S. reference is: O. M. Kosolapoff, Organophosphorous Compounds, N. Y., 385 (1950).

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Synthesis of Acyl Derivatives of O,O-Dibutyl-thiophosphoric Acid

77893
SOV/79-30-2-44/78

ASSOCIATION: L'vov State University (L'vovskiy gosudarstvennyy universitet)

SUBMITTED: May 15, 1959

Card 3/3

ZEMLYANSKIY, N.I.

Combustion of hydrocarbons in chlorine. Nauk. zap. L'viv. un. 13: 103-112 '49. (MIRA 12:10)

1.Kafedra organicheskoy khimii L'vovskogo gosudarstvennogo universiteta imeni I. Franko.

(Methane) (Chlorine)

ZEMLYANSKIY, N.I.; MALINOVSKIY, M.S.

Synthesis of acyl derivatives of O,O-dialkylthiophosphates. Zhur. ob.khim. 26 no.6:1677-1678 Je '56. (MIRA 11:1)

1.L'vovskiy gosudarstvennyy universitet.
(Chemistry, Organic--Synthesis) (Thiophosphates)

ZEMLYANSKIY, N.I; PRIB, O., student IV kursa; SHARYPKINA, M., student IV kursa; KOSTENKO, A., student III kursa; GLUSHKO, A., student III kursa; KOZHEVNIKOVA, O., student III kursa; KRASILOVSKAYA, T., student III kursa; SEREDA, N., student III kursa; PINTOVA, N., student III kursa; TSERKEVICH, G., student III kursa; SHAPKA, V., student III kursa

Condensation of aromatic hydrocarbons with halogen derivatives of aldehydes. Nauk. zap. L'viv. un. 13:129-135 '49.
(MIRA 12:10)

1.Kafedra organicheskoy khimii L'vovskogo gosudarstvennogo universiteta im. I. Franko.
(Hydrocarbons) (Aldehydes)

PANOV, Ye.M.; ZEMLYANSKIY, N.N.; KOCHESHKOV, K.A.

Study of the element-oxane bond. Lead oxanes. Dokl. AN SSSR 143 no.3:603-605 Mr '62. (MIRA 15:3)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova. 2. Chlen-korresponsent AN SSSR (for Kocheshkov).
(Lead organic compounds)

ZEMLYANSKIY, N.N.; LODOCHNIKOV, V.N.; PANOV, Ye.M.; KOCHESHKOV, K.A.

Synthesis of plumboxanes of the $(RCOOPbAr_2)_2O$ type. Zhur. ob. khim. 35 no.5:843-845 My '65. (MIRA 18:6)

1. Fiziko-khimicheskiy institut imeni Karpova, Moskva.

ZEMLYANSKIY, N.N.; PANOV, Ye.M.; SHAMAGINA, O.P.; KOCHESHKOV, K.A.

Synthesis of tin oxanes $RCOO[Sn(C_4H_2)_2O]$ OCR. Zhur. ob. khim. 35 no.6:1029-1031 Je '65. (MIRA 18:6)

1. Fiziko-khimicheskiy institut imeni Karpova.

S/020/62/146/006/010/020
B106/B186

AUTHORS: Zemlyanskiy, N. N., Panov, Ye. M., Kocheshkov, K. A., Corresponding Member AS USSR

TITLE: Dialkyl tin

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 146, no. 6, 1962, 1335-1336

TEXT: As no reliable method has so far been worked out for the synthesis of tin dialkyls, the data published on these compounds differ greatly. Referring to a reaction made by G. Wittig, F. I. Meyer, G. Lange (Ann., 571, 167 (1951)) the authors of this article succeeded in synthesizing analytical-grade di-n-butyl tin and diethyl tin by reacting a suspension of anhydrous $SnCl_2$ in a 1:4 mixture of ether and benzene with an ether solution of n-butyl lithium and with ethyl lithium, respectively (reaction temperature, $-10^{\circ}C$; molar ratio between $SnCl_2$ and alkyl lithium = 1:2). Di-n-butyl tin is thus obtained in a yield of 63.7% and in the form of a dark cherry-red oil readily soluble in hexane, benzene, toluene, ether, chloroform, and carbon tetrachloride, but poorly soluble in alcohol and

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Dialkyl tin ..

acetone. Diethyl tin is obtained similarly in a yield of 40.8% in the form of a dark, cherry-red oil which is as soluble as di-n-butyl tin. Both tin dialkyls oxidize in air and more quickly in solution. In the case of di-n-butyl tin, a white product is formed, which, together with HCl, gives $(C_4H_9)_2SnCl_2$, m.p. 42-43°C. The oxidation of diethyl tin is more complex. Di-n-butyl tin reacting with bromine in CCl_4 gives $(C_4H_9)_2SnBr_2$, m. p. 18.5-19.5, in a quantitative yield. Di-n-butyl tin heated in a sealed ampoule with an argon atmosphere begins to precipitate metallic tin at 230°C. The tin dialkyls synthesized here are polymers. Their molecular weights were determined by cryoscopy and ebullioscopy and were found to be 1780 and 1633, respectively, for diethyl tin, and 1921 and 1745, for di-n-butyl tin. There is 1 table. The most important English-language references are: T. Harada, Sci. Papers Inst. Phys. Chem. Res. (Tokyo), 35, 290 (1939); S.F.A. Kettle, J. Chem. Soc., 1959, 2936.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-chemical Institute imeni L. Ya. Karpov)

SUBMITTED: July 9, 1962

Card 2/2

ZEMLYANSKIY, N.N.; PANOV, Ye.M.; SLOVOKHOTOVA, N.A.; SHAMAGINA, O.P.; KOCHESHKOV, K.A.

Stepped formation of compounds with a stanno-oxane bond and reactive terminal groups. Dokl. AN SSSR 149 no.2:312-315 Mr '63. (MIRA 16:3)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova. 2. Chlen-korrespondent AN SSSR (for Kocheshkov).

ZEMLYANSKIY, N. N.; GOL'DSHTEYN, I. P.; GUR'YANOVA, Ye. N.; PANOV, Ye. M.; SLOVOKHOTOVA, N. A.; KOCHESHKOV, K. A.

Structure of compounds with a stannoxane bond studied by means of dipole moments and infrared spectra. Dokl. AN SSSR 156 no. 1:131-134 My '64. (MIRA 17:5)

1. Fiziko-khimicheskiy institut im. L. Ya. Karpova. 2. Chlen-korrespondent AN SSSR (for Kocheskhov).

GOL'DSHTEYN, I.P.; [illegible], N.N.; SHAMAGINA, L.P.; GUR'YANOVA, Ye.N.; PANOV, Ye.N.; [illegible], N.A.; KOCHESHKOV, K.A.

Organotin complex compounds of a new type. Dokl. AN SSSR 163 no.4:880-883 Ag '65. (MIRA 18:8)

1. Chlen-korrespondent AN SSSR (for Kocheshkov).

SLOVOKHOTOVA, N.A.; FAYZI, N.A.; ZEMLYANSKIY, N.N.; PANOV, Ye.M.; KOCHESHKOV, K.A.

Structure of some organotin salts of carboxylic acids. Zhur. ob. khim. 33 no.8:2610-2613 Ag '63. (MIRA 16:11)

AUTHORS: Zenlyanskiy, N. N., Panov, Ye. M., Slovokhotova, N. A., Shamagina, O. P., Kocheshkov, K. A., Corresponding Member AS USSR

TITLE: Stepwise formation of compounds with a stannoxane bond and reactive end groups

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 149, no. 2, 1963, 312 - 315

TEXT: It was found in earlier work (K. A. Kocheshkov et al. Izv. AN SSSR, OKhN, 1961, no. 12, 2255) that the hydrolysis of the tin salts of organic acids with a definite quantity of water in the presence of diazo alkanes proceeds according to the equation

$$2R_2Sn(OOCCH_3)_2 + 2CH_2N_2 + H_2O \longrightarrow CH_3COO\cdot Sn(R)_2OSn(R)_2OOCCH_3 + 2CH_3COOCH_3 + 2N_2$$

This process makes it possible to obtain linear compounds with active end groups. It is shown here how, by varying the quantity of water and diazo methane, it is possible to terminate the progression of reactions monomer ⟶ dimer ⟶ tetramer ⟶ octamer ⟶ hexadecamer at any stage.

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Stepwise formation of compounds... S/020/63/149/002/015/028
B108/B186

The infrared spectra of the compounds with a stannoxane bond were examined, the molecular weight, the temperatures of boiling, melting, and decomposition were determined. At slightly increased temperatures (40 - 45° C) it is possible to obtain stannoxanes also of higher molecular weight. There are 1 figure and 1 table.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-chemical Institute imeni L. Ya. Karpov)

SUBMITTED: November 22, 1962

Card 2/2

30170
S/062/61/000/012/011/012
B117/B147

5.3700

AUTHORS: Kocheshkov, K. A., Panov, Ye. M., and Zemlyanskiy, N. N.

TITLE: Stepwise formation of the elementoxane chain in the presence of diazo alkanes

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 12, 1961, 2255

TEXT: In the present "Letter to the Editor", the authors report on the reaction of elemental organic compounds with diazo alkane. They point out that the usually practiced hydrolysis, e.g., of $R_2Sn(OOCR)_2$, results in a mixture of organic tin compounds. In the case examined, an increase of the elementoxane chain takes place whereby, during the individual stages, pure products are isolated and the RCOO end groups are preserved, such as for $(n\text{-}C_4H_9)_2Sn(OOCCH_3)_2$. Monomer (boiling point 142° - 145°C (100 mm Hg)) ⟶ dimer (melting point 58° - 60°C) ⟶ tetramer (melting point 138° - 139°C) ⟶ octamer (decomposition at above 200°C), etc. The

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Stepwise formation of the...

reaction is shown by the example of two elements (Sn, Pb). The authors concluded, however, that the reaction may be extended to other elemental organic compounds comprising at least two saponifiable groups in the element (e.g., $R_2Si(OOCR)_2$ or $RTl(OOCR)_2$, etc.). With diazomethane: (a) $2R_2SnX_2$ (I) $\longrightarrow X(R)_2Sn\text{-}O\text{-}Sn(R)_2X$ (II). (II) is $C_{20}H_{42}O_5Sn_2$ having a molecular weight of 591. (b) $2X(R)_2Sn\text{-}O\text{-}Sn(R)_2X$ (II) $\longrightarrow$ $\longrightarrow X(R)_2Sn\text{-}[O(R)_2Sn]_3\text{-}X$ (III). (III) is $C_{36}H_{78}O_7Sn_4$, molecular weight 1109. (c) $2X(R)_2Sn\text{-}[O(R)_2Sn]_3\text{-}X$ (III) $\longrightarrow X(R)_2Sn\text{-}[O(R)_2Sn]_7\text{-}X$ (IV). (IV) is $C_{68}H_{150}O_{11}Sn_8$, molecular weight 2156. In each case, R = n-C_4H_9 and X = $OOCCH_3$. (d) $2R_2PbX_2$ (I) $\longrightarrow X(R)_2Pb\text{-}O\text{-}Pb(R)_2X$ (II). In this case, R = C_6H_5 and X = $OOCCH(CH_3)_2$. (II) is $C_{32}H_{34}O_5Pb_2$ decomposition at 240°C. (II) was also obtained with diazoethane and diazobutane. [Abstracter's note: Essentially complete translation.] There is 1 Soviet reference.

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33932
S/079/62/032/001/009/016
D202/D302

5.3700

AUTHORS: Zemlyanskiy, N.N, Panov, Ye.M., and Kocheshkov, K.A.

TITLE: Synthesis of organostannic salts of organic acids

PERIODICAL: Zhurnal obshchey khimii, v. 32, no. 1, 1962, 291-293

TEXT: The authors describe a new method of preparing organostannic salts with organic acids by an exchange reaction between organic lead salts and organic halides of tin, stating that this reaction takes place easily with fairly high yields, e.g. $(Bu)_2SnBr_2 + Pb(OOC.CH_3)_2 \rightarrow (Bu)_2Sn(OOC.CH_3)_2 + PbBr_2$. The lead salts of liquid organic acids can be obtained by dissolving litharge in the corresponding acid and may be directly used for the reaction; organostannic salts of dicarboxylic acids can be obtained by direct action of the acid on tin tetraethyl. The starting Sn organic chlorides were obtained by usual methods. The authors synthesized 6 known and 3 new compounds and give full details of the procedure. 1) Triethyl tin acetate was obtained in 77.8 % yield by boiling lead acetate

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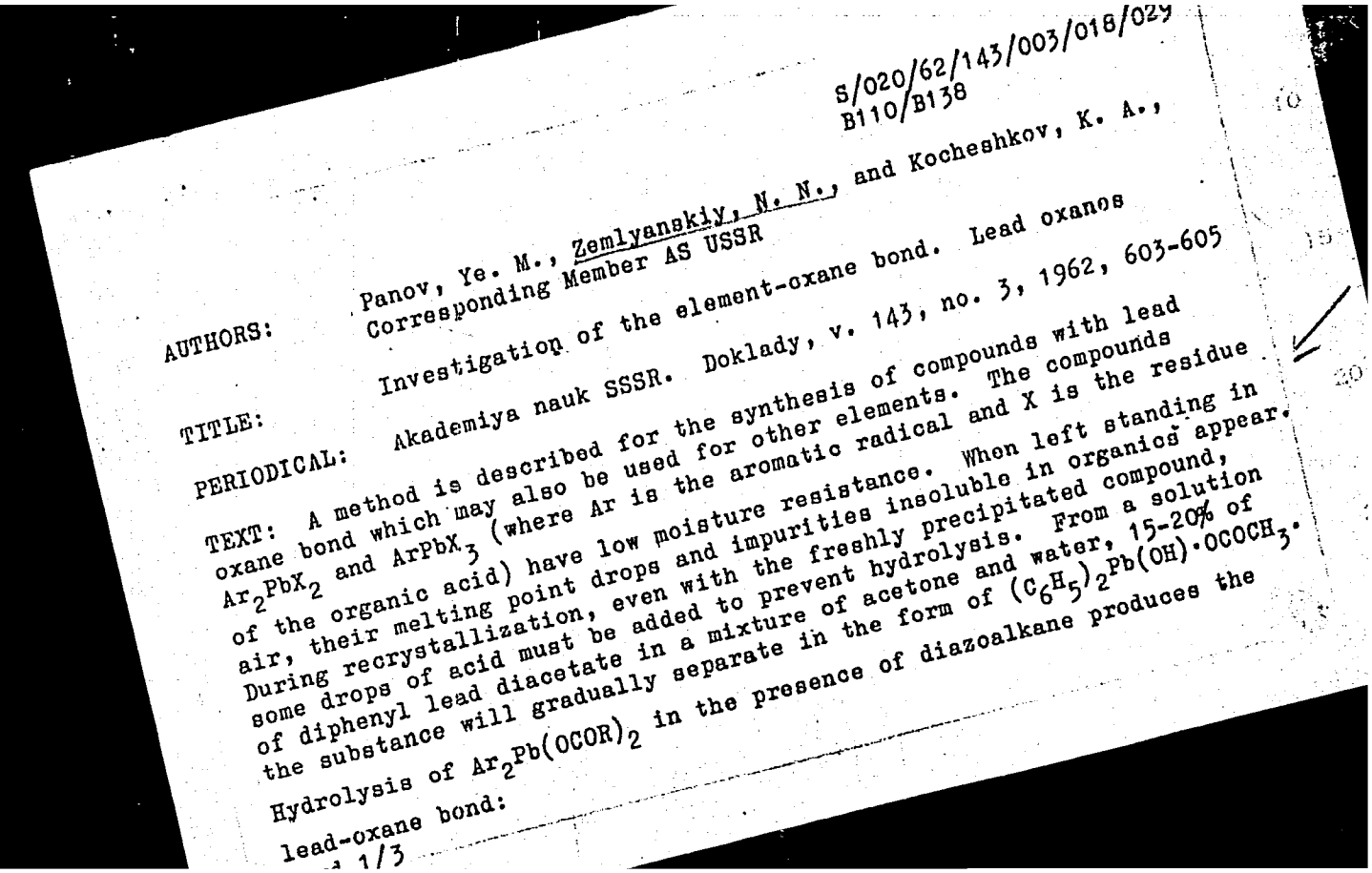
S/079/62/032/001/009/016
D202/D302

Synthesis of organostannic salts ...

with triethyl tin chloride. 2) Tributyl tin acetate from lead acetate and tri-n-butyl tin chloride; yield - 84.5 %. 3) Triethyl tin methacrylate from PbO in methacrylic acid and triethyl tin chloride; yield - 58.7 %; 4) Tri-n-butyl tin methacrylate from PbO in methacrylic acid and tri-n-butyl tin chloride; yield - 99.1 %. 5) Di-n-butyl tin diacetate from lead acetate and di-n-butyl tin bromide; yield 85.4 %. 6) Triphenyl tin acetate from lead acetate and triphenyl tin chloride; yield 84.5 %. Physical constants determined for these products were in very good agreement with data given in literature. 7) Diethyl tin adipate was obtained by heating tetraethyl tin with adipic acid; yield - 90 %; m.p. 143-144°C. The compound is soluble in cold $CHCl_3$ and in hot benzene, toluene, tylene, dichloethane and CCl_4. 8) Diethyl tin azelate was obtained by heating tetraethyl tin and azelaic acid. The yield was 79.95 %; m.p. 121-124.5°C. Its solubility is similar to that of the adipate. 9) Diethyl tine sebacate was obtained in the same way from tetraethyl tin and a slight excess of sebacic acid. The yield was 64.9 %; m.p. 122-123°C. Its solubility is similar to that of the above compounds.

Card 2/3



S/020/62/143/003/018/029
B110/B138

AUTHORS: Panov, Ye. M., Zemlyanskiy, N. N., and Kocheshkov, K. A., Corresponding Member AS USSR

TITLE: Investigation of the element-oxane bond. Lead oxanes

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 3, 1962, 603-605

TEXT: A method is described for the synthesis of compounds with lead oxane bond which may also be used for other elements. The compounds Ar_2PbX_2 and $ArPbX_3$ (where Ar is the aromatic radical and X is the residue of the organic acid) have low moisture resistance. When left standing in air, their melting point drops and impurities insoluble in organics appear. During recrystallization, even with the freshly precipitated compound, some drops of acid must be added to prevent hydrolysis. From a solution of diphenyl lead diacetate in a mixture of acetone and water, 15-20% of the substance will gradually separate in the form of $(C_6H_5)_2Pb(OH)\cdot OCOCH_3$. Hydrolysis of $Ar_2Pb(OCOR)_2$ in the presence of diazoalkane produces the lead-oxane bond:

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S/020/62/143/003/018/029
B110/B138

Investigation of the element- ...

$$2(C_6H_5)_2Pb(OCOCH_3)_2 + 2H_2O + 2CH_2N_2 \rightarrow 2CH_3COOCH_3 + 2N_2$$

$$+ CH_3COO-\underset{\underset{C_6H_5}{|}}{\overset{C_6H_5}{|}}{Pb}-O-\underset{\underset{C_6H_5}{|}}{\overset{C_6H_5}{|}}{Pb}-OCOCH_3$$

After addition of water 1-2 ml ethereal diazoalkane to the acetone solution of $Ar_2Pb(OCOR)_2$, tetraphenyl diplumbo-oxane diacetate crystallizes out within a few minutes. Excess diazomethane produces almost quantitative yield. In the same way, tetraphenyl diplumbo-oxane was obtained with a yield of 72%. As the reaction does not take place with dry solvents, the hydrolysis of the organo lead salt is the first reaction phase. Diazoalkane does not participate in the synthesis of the final product, but only binds the acid formed during hydrolysis, thus preventing reaction reversal. When heating with organic acids, the lead-oxane bond is t oken, and the initial product is re-formed. There are 5 references. The most important reference to English-language publications is: W. T. Reichle, J. Polym. Sci., 49, 521 (1961).

Card 2/3

ACC NR: AP6030843 EWT(m)/EWP(j) IJP(c) WW/RM (A, N) SOURCE CODE: UR/0191/66/000/009/0010/0011

AUTHOR: Gel'fman, Ya. A.; Zemlyanskiy, N. N.; Lauris, I. V.; Syutkina, O. P.; Kuskova, V. P.; Panov, Ye. M.

ORG: none

TITLE: Stabilization of polyvinylchloride by organotinoxanes

SOURCE: Plasticheskiye massy, no. 9, 1966, 10-11

TOPIC TAGS: vinyl chloride, polymer, tin compound, organotin compound, organometallic compound, solid mechanical property, heat resistance

ABSTRACT: The effect of organotinoxane-type additives [$CH_3COO(C_4H_9)_2SnO$, $CH_3COO[(C_4H_9)_2SnO]_4OCCH_3$, and $[C_{11}H_{23}COO(C_4H_9)_2Sn]_2O$] on the thermal stability of polyvinylchloride was investigated. The aging characteristics of the stabilized PVC was tested according to GOST 10226-62 and the decomposition temperature was tested according to the GOST5960-51 standard. It was found that the PVC stabilized with organotinoxanes had a thermal stability comparable to that of PVC stabilized with conventional R_2PbX_2 stabilizers. It was also found that the organotinoxane stabilizer based on acetic acid was as effective as that based on lauric acid. Orig. art. has: 2 tables.

SUB CODE: 11/ SUBM DATE: 00/ ORIG REF: 004/ OTH REF: 004.

Card 1/1 net

UDC: 678.743.22:678.048.9

KOPANTSEV, M.M.; ZEMLYANSKIY, P.N.

Building sulfur dioxide exhaust fans with facilities existing in the enterprise. Bum.prom. 31 no.1:14-16 Ja '56. (MLRA 9:5)

1. Vtoroy Kaliningradskiy tsellyulozno-bumazhnyy kombinat.
(Woodpulp industry) (Exhaust systems)

BEREZOVSKIY, V.A. [Berezovs'kyi, V.A.]; ZEMLYANSKIY, S.V. [Zemlians'kyi, S.V.]

Temperature variations in the gastric mucosa caused by acetylcholine, adrenaline, and noradrenaline. Fiziol. zhur. [Ukr.] 7 no.2:235-242 Mr-Ap '61. (MIRA 14:4)

1. Laboratory of the Physiology of Digestion of the A.A.Bogomolets Institute of Physiology of the Academy of Sciences of the Ukrainian S.S.R., Kiev, and the Department of General and Experimental Pathology of Warsaw Pathology of Warsaw Medical Academy.
(BODY TEMPERATURE) (STOMACH)
(NERVOUS SYSTEM, AUTONOMIC)

ZEMLYANSKIY, S.V. [Zemlians'kyi, S.V.]; BEREZOVSKIY, V.Ya. [Berezovs'kyi, V.IA.]

Changes in the temperature of the gastric mucosa due to the effect of histamine. Fiziol. zhur. [Ukr.] 6 no.3:336-343 My-Je '60. (MIRA 13:7)

1. Institut fiziologii im. A.A.Bogomol'tsa AN USSR, laboratoriya pishchevareniya i Varshavskaya Meditsinskaya Akademiya, kafedra obshchey i eksperimental'noy patologii.

(STOMACH--SECRETIONS) (BODY TEMPERATURE)
(HISTAMINE)

ACC NR: AP6007900 SOURCE CODE: UR/0420/65/000/002/0098/0105

AUTHOR: Zemlyanskiy, V. A. (Docent)

ORG: None

TITLE: Investigation of the three-dimensional deformation of a metal subjected to cutting by a circular rotary cutter

SOURCE: Samoletostroyeniye i tekhnika vozdushnogo flota, no. 2, 1965, 98-105

TOPIC TAGS: metal stress, metal cutting, material deformation

ABSTRACT: The article describes an investigation of three-dimensional deformation of a metal chip being cut on a circular rotary cutter. The study dealt with the region of optimal conditions ($v_c = v_d$; where v_c is the circular velocity of the cutting edge and v_d is the speed of descent of the chip). The following conclusions are reached. The longitudinal deformations of the chip (compression and shear) are uniform and are determined by the angle of inclination of the cutter axis λ. The transverse deformations of the chip depend on the cutting pattern, the size of the static back-rake angle of the cutter, and cutting speed; the nature of this relationship is analogous to similar relationships for standard cutters. The most substantial decrease in the degree of deformation is noted with an increase in angle λ. The field of deformation in the transverse cross section of the chip is highly non-uniform. The metal undergoes its greatest deformation not only on the surface of contact with the front edge of the cutter, but also on the chip-worked piece surface, which is never in contact with the back

L 22971-66

ACC NR: AP6007900

rake of the cutter. In cutting in the region $v_c = v_d$, the chip changes shape due to internal deformation without any marked slip along the back rake. In the region $v_c \neq v_d$ ($\lambda < 30°$), the deformation in the chip is accompanied by considerable slip along the back rake of the cutter. Orig. art. has: 3 tables, 11 figures, and 5 formulas.

SUB CODE: 13, // / SUBM DATE: none / ORIG REF: 005

Card 2/2

ACC NR: AP7005574 (A) SOURCE CODE: UR/0145/66/000/011/0120/0124

AUTHOR: Zemlyanskiy, V. A. (Docent); Alekseyev, Yu. (Professor; Doctor of technical sciences)

ORG: none

TITLE: The calculated basis of the wear resistance of round rotating cutting tools

SOURCE: IVUZ. Mashinostroyeniye, no. 11, 1966, 120-124

TOPIC TAGS: wear resistance, cutting tool, rotating cutting tool, metal cutting, physical parameter

ABSTRACT: A theoretical evaluation is given of the reasons for extending the period of wear resistance of the cutting tool by replacing the standard cutting tool with a rigidly fixed cutting edge by a round rotating cutting tool. The effect appears to be due to the shortening of the path of a point on the rotating cutting edge in material being machined and to decreasing the wear of its faces through a favorable change in the physical parameters in the cutting zone. The paper was presented by Professor Alekseyev, Yu., Doctor of technical sciences, Khar'kov Aviation Institute, 02 Nov 65. Orig. art. has: 2 figures and 12 formulas. [Translation of authors' abstract]

SUB CODE: 13/SUBM DATE: 02Nov65/ORIG REF: 013/ UDC: 621.90.025 [NT]

Card 1/1

L 37147-66 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l)

ACC NR: AP6006441 SOURCE CODE: UR/0420/65/000/003/0086/0091

AUTHOR: Zemlyanskiy, V. A. (Docent)

ORG: none

TITLE: Wear of round rotating cutting tools as a function of cutting edge path in the machined material

SOURCE: Samoletostroyeniye i tekhnika vozdushnogo flota, no. 3, 1965, 86-91

TOPIC TAGS: rotating cutting tool, cutting tool, tool wear

ABSTRACT: The wear of round rotating cutting tools (RRCT) as a function of cutting edge path in the machined material was theoretically and experimentally investigated. Based on the special kinematics of RRCT's (V. A. Zemlyanskiy. Kinematika rezaniya kruglymi samovrashchayushchimisya reztsami. Sb. Samoletostroyeniye i tekhnika vozdushnogo flota, vyp. 1, Izd-vo KhGU, 1964), an expression for the tool life is derived as

$$\tau = \frac{h}{A_{av} V_{av}} = \frac{h}{V_{av} \varphi\left(\frac{H_p}{H_0} P, C, D, T, L\right)}$$

(where

$$V_{av} = V \frac{\frac{S}{2} + \cos\lambda \sqrt{2Rt}}{2\pi R}$$

Card 1/2 UDC: 6G5.1 C17

L 37147-66

ACC NR: AP6006441

normal nomenclature). The average tool velocity V_{av} is always lower for RRCT's than for normal cutting tools. Based on these equations, the best cutting parameters for maximum productivity for rough cutting and finish cutting of materials with RRCT's are derived. Experimental data for various cutting conditions are presented to support the derived equations. It was found that the accumulated wear is directly proportional to the cutting time, average cutting edge speed, and to the cutting edge wear coefficient. Orig. art. has: 3 tables, 4 figures, and 14 formulas.

SUB CODE: 13/ SUBM DATE: none/ ORIG REF: 005

Card 2/2 af

ZEMLYANSKIY, V.A., kand. tekhn. nauk; GRANIN, Yu.F.; STARCHENKO, B.V.

Circular self-rotating cutters. Mashinostroitel' no.6:35-36 Je '65.
(MIRA 18:7)

ZEMLYANSKIY, V.A.

122-2-33/33

AUTHOR: None given

TITLE: Dissertations (Avtoreferaty dissertatsiy)

PERIODICAL: Vestnik Mashinostroyeniya, 1958, No.2, p.86 (USSR)

ABSTRACT: N.F. Bocharnikov - Research into Ways of Substituting Tin in Cast Copper Base Alloys (Izyskaniye putey zameny olova v liteynykh splavakh na mednoy osnove). Submitted to TsNIITMASh. As a result of laboratory research carried out by the author, a copper base alloy has been obtained not containing tin and possessing good mechanical and casting properties, as well as satisfactory anti-friction properties and a good resistance against corrosion and cavitation. It is noted in the conclusions that the alloy so obtained can, in many instances, replace tin bronzes and aluminium bronzes which have poor casting qualities. V.A. Zemlyanskiy - Research into the Process of Chip Breaking by a Cutting Tool Provided with a Chip Breaking Device (Issledovaniye protsessa drobleniya struzhki na reztse so struzhkolomom) Submitted to the Moscow Aviation Production Institute (Moskovskiy aviatsionnyy tekhnologicheskiy institut). The work contains an analysis of the forces acting on the chip breaking device. A procedure for designing the chip breaker dimensions is proposed and verified. This procedure is suitable for different conditions of machining and does not require complicated computations

Card 1/2

Dissertations

122-2-33/33

or tables.

L.V. Khudobin - The Development and Evaluation of Novel Production Methods with Cylindrical Grinding Machines (Razrabotka i issledovaniye novykh tekhnologicheskikh vozmozhnostey krugloshlifoval'nykh stankov). Submitted to the Moscow Machine Tool and Tool Institute imeni I.V. Stalin (Moskovskiy stankoinstrumental'nyy institut imeni I.V. Stalina). Possible methods of production using cylindrical grinding machines provided with an automatic system of control, monitored by the magnitude of the radial grinding force are considered. Tests carried out on a cylindrical grinding machine with longitudinal workpiece traversing were the basis of the automatic control system described.

V.V. Zars - Research into Vibrations in Turning (Issledovaniye vibratsiy pri tochenii). Submitted to the Leningrad Polytechnical Institute imeni M.I. Kalinin (Leningradskiy politekhnicheskiy institut imeni M.I. Kalinina).

AVAILABLE: Library of Congress

Card 2/2

ZEMLYANSKIY, V.A., kand. tekhn. nauk, dotsent; GRIMIN, Yu.P., aspirant

Deformation of the cut-off layer in cutting metals with round self-rotating cutting tools. Izv. vys. ucheb. zav.; mashinostr. no.3:151-157 '64. (MIRA 17:7)

1. Khar'kovskiy aviatsionnyy institut.

ZEMLYANSKIY, V.A., kand.tekhn.nauk

Investigating circular rotary cutting tools. Izv.vys.ucheb.zav.; mashinostr. no.7:113-120 '60. (MIRA 13:11)

1. Khar'kovskiy aviatsionnyy institut.
(Metal-cutting tools)

GORB, T.V. [Horb, T.V.], doktor sel'skokhoz.nauk; TERESHCHENKO, F.K., kand.biolog.nauk; BOGAYEVSKIY, O.T. [Bohaievs'kyi, O.T.], kand. veterin.nauk; POTYEMKIN, M.D. [Pot'omkin, M.D.], akademik; KNIGA, M.I. [Knyha, M.I.]; POPOV, O.Ya., kand.sel'skokhoz.nauk; KHMELIK, G.G. [Hmelyk, H.H.], kand.sel'skokhoz.nauk; SHRAM, I.P., kand.sel'skokhoz.nauk [deceased]; KOPIL, A.M., kand.sel'skokhoz. nauk; TSELYUTIN, V.K., kand.sel'skokhoz.nauk; BOZHKO, P.Yu., doktor sel'skokhoz.nauk; KROMIN, S.S., kand.sel'skokhoz.nauk; ZEMLYANSKIY, V.M. [Zemlians'kyi, V.M.], kand.sel'skokhoz.nauk; BORISENKO, A.M. [Borysenko, A.M.], kand.biolog.nauk; ZAKHARENKO, V.B., kand.biolog. nauk; SMIRNOV, I.V. [Smyrnov, I.V.], kand.biolog.nauk; KHRABUSTOVSKIY, I.F. [Khrabustovs'kyi, I.F.], kand.biolog.nauk; TORSTYANETSKAYA, M.N., [Trostianets'ka, M.N.], assistent; ALESHKO, P.I., inzh.; VASIL'YEV, Vasyl'iev, O.F., kand.tekhn.nauk; BUGAYENKO, I.I. [Buhaienko, I.I.], starshiy prepodavatel'; TRAKHTOMIROVA, O.O., kand.ekonom.nauk; BUTKO, S.D., kand.ekonom.nauk; TELESHIK, K.G. [Teleshyk, K.H.], doktor ekonom.nauk; YAROSHENKO, V.D., kand.ekonom.nauk; LISIY, I.Y. [Lysyi, I.I.], red.; YEROSHENKO, T.G. [IEroshenko, T.H.], tekhn.red.

[Handbook for zootechnicians] Dovidnyk zootekhnika. 2., dopovnene i pereroblene vyd. Kyiv, Derzh.vyd-vo sil's'kohospodars'koi lit-ry URSR, 1960. 728 p. (MIRA 15:2)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I. Lenina (for Potemkin). 2. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Kniga).
(Stock and stock breeding)

807. ELEPHANTIASIS OF THE VULVA (Russian text) - Zemlyansky V. N. ARKH. PATOL. 1957, 19/7 (71-73) Illus. 2

Elephantiasis vulvae is rare in Europe but more common in the Near East, India and in Central America. Its aetiology has not been established but the condition may be attributed to interference with lymphatic drainage. The author reports 2 cases of this disease. In the first case a 33-year-old woman developed a tumour 38 x 25 cm. in the left labium minus following tb of the inguinal lymph nodes. The lesion was resected and histological examination revealed connective tissue hyperplasia, oedema, and marked proliferation and dilatation of the lymphatics. The second patient, a 38-year-old woman, had a tumour of the left labium majus, 48 x 28 x 24 cm. in size. The enlarged labium was removed surgically and was histologically very similar to the first case. In this instance the aetiology of the elephantiasis could not be ascertained. Wilson - Dearborn, Mich. (V, 10, 16)

USSR/Farm Animals. Horses. Q

Abs Jour: Ref Zhur-Biol., No 20, 1958, 92568.

Author : Zemlyanskiy, V.N.
Inst : Kharkhov Zootechnical Institute.
Title : The Amplitude of Movement in the Joints of the Extremities in Trotting Horses.

Orig Pub: Sb. tr. Khar'kovsl. zootekhn. in-ta, 1957, 9, 215-227.

Abstract: The pace in trotters was studied. A description is given of the relative position of the extremities during various stages of movement - at a walk, a trot and when racing. The fundamental functions of the extremities were studied in diverse sectors of movement. The length of the stride and sector in horses

Card : 1/2

ZEMLYANSKIY, V. N., Doc Biol Sci -- (diss) "On certain regularities in the biomechanics of ~~motion and bearing~~ the movement and carriage of the horsex in terms of factors influencing its basic productivity." Khar'kov, 1958. 21 pp (Min of Agriculture USSR, Khar'kov Vet Inst), 160 copies (KL, 35-58, 106)

ZEMLYANSKIY, V.N.

ZEMLYANSKIY, V.N. (Leningrad)

Vulvar elephanthiasis [with summary in English]. Arkh.pat. 19 no.7: 71-73 '57. (MLRA 10:9)

1. Iz kafedry patologicheskoy anatomii (zav. - prof. P.V.Sipovskiy) Gosudarstvennogo instituta dlya usovershenstvovaniya vrachey i Kologrivskoy gorodskoy bol'nitsy.

(TUBERCULOSIS, FEMALE GENITAL, complications, vulvar elephanthiasis (Rus))
(LYMPHEDEMA, etiology and pathogenesis, vulvar elephanthiasis caused by tuberc. (Rus))

ZEMLYANSKIY, V. N.

Zemlyanskiy, V. N. - "The motographic method in the study of the mechanism of horse movements", Sbornik Trudov, (Khar'k. zootekhn. in-t), Vol. V, Issue 1, 1948, p. 93-142, - Bibliog: 31 items.

SO: U-3042, 11 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 6, 1949).

1. ZEMLYANSKIY, V. N.

2. USSR (600)

4. Water Supply, Rural

7. Mechanical method for watering horses. Konevodstvo 23, No. 5, 1953.

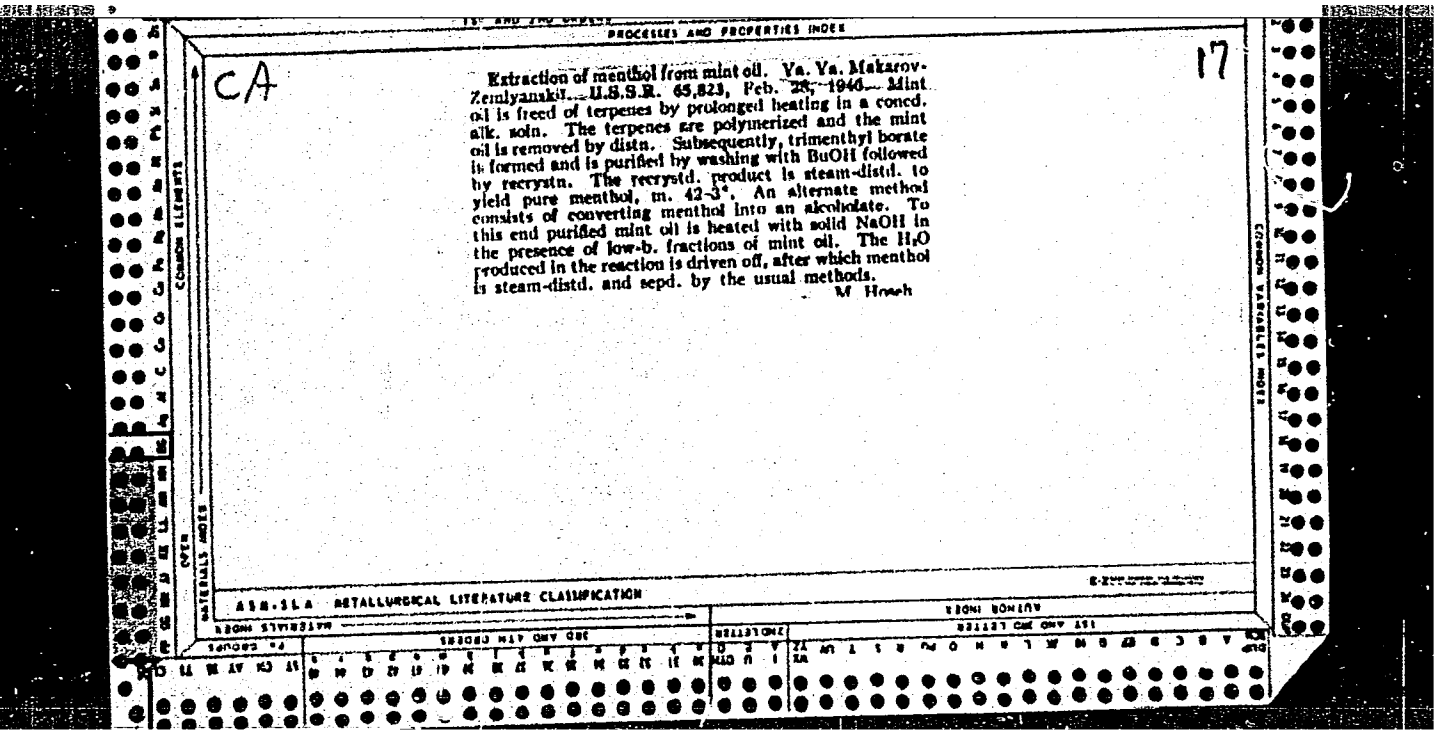
9. Monthly List of Russian Accessions, Library of Congress, April 1953. Unclassified.

ZEMLYANSKIY, V. N.

Zemlyanskiy, V. N.

"Some laws of the biomechanics of motion and footing of the horse as factors influencing its basic productivity." Min Higher Education Ukrainian SSR. Ukrainian Order of Labor Red Banner Agricultural Academy. Kiev, 1956. (Dissertation for the Degree of Doctor in Agricultural Sciences).

Knizhnaya letopis'
No. 21, 1956. Moscow.



PROCESSES AND PROPERTIES INDEX

CA

17

Extraction of menthol from mint oil. Ya. Ya. Makarov-Zemlyanskii. U.S.S.R. 65,823, Feb. 28, 1946. Mint oil is freed of terpenes by prolonged heating in a concd. alk. soln. The terpenes are polymerized and the mint oil is removed by distn. Subsequently, trimenthyl borate is formed and is purified by washing with BuOH followed by recrystn. The recrystd. product is steam-distd. to yield pure menthol, m. 42–3°. An alternate method consists of converting menthol into an alcoholate. To this end purified mint oil is heated with solid NaOH in the presence of low-b. fractions of mint oil. The H_2O produced in the reaction is driven off, after which menthol is steam-distd. and sepd. by the usual methods.

M Hoseh

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

ZEMLYANSKIĬ, V.A., inzhener.

Designing chip breakers. Vest.mash. 37 no.6:57-62 Je '57. (MLRA 10:7)
(Machine tools--Attachments)

62

14703* (Problem of Chip Breaking.) K voprosy o struzh-kodrobleniI. V. A. Zemliauskii. *Vestnik Mashinostroeniia*, v. 33, no. 12, Dec. 1953, p. 77-82.

Calculation of chip breaking process; criterion of its deformation which permits separation of curling and breaking zones. Diagrams, graphs; tables. 20 ref.

ZEMLYANSKIY, V.A., inzhener.

Chip breaking. Vest. mash. 33 no.12:77-82 D '53. (MLRA 6:12)
(Cutting tools)

ZEMLYANSKIY, V.N.

2055. ELEPHANTHIASIS OF THE VULVA (Russian text) - Zemlyanskiy V. N. - ARKH. PATOL. 1957, 19/7 (71-73) Illus. 2

Elephantiasis vulvae is rare in Europe but more common in the Near East, India and in Central America. Its aetiology has not been established but the condition may be attributed to interference with lymphatic drainage. The author reports 2 cases of this disease. In the first case a 33-year-old woman developed a tumour 38 x 25 cm. in the left labium minus following tb of the inguinal lymph nodes. The lesion was resected and histological examination revealed connective tissue hyperplasia, oedema, and marked proliferation and dilatation of the lymphatics. The second patient, a 38-year-old woman, had a tumour of the left labium majus, 48 x 28 x 24 cm. in size. The enlarged labium was removed surgically and was histologically very similar to the first case. In this instance the aetiology of the elephanthiasis could not be ascertained. Wilson - Dearborn, Mich. (V, 10, 16)

ZEMLYANSKIY, Ye.G., gornyy inzhener.

"Water draining vacuum wells" by S.V.Komissarov Reviewed by E.G. Zemlianskii. Ugol' 32 no.2:47-48 F '57. (MLRA 10:3)

1. Trest Soyuzshakhtoosusheniye.
(Mine drainage) (Komissarov, S.V.)

ZEMLYANSKIY, Ye.G., gornyy inzhener; PUKHTINSKIY, A.N.

Remarks on G.F.Mikheev's article "Safe distribution of drainage wells in draining coal sands." Ugol' 29 no.5:45-46 My '54. (MLRA 7:6)

1. Trest Soyuzshakhtoosushenlye (for Zemlyanskiy). 2. Trest Nelidovshakhtostroy (for Pukhtinskiy).

(Mine drainage)
(Mikheev, G.F.)

ZEMLYANSKOV, V.D.; CHEPLANOV, V.I.

Improvement of planning indices in ferrous metallurgy. Stal' 23 no.5:471-473 My '63. (MIRA 16:5)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
(Iron and steel plants—Management)
(Index numbers (Economics))

ZEMLYANSKOV, V.D.

"Accounting and the analysis of business transactions in metallurgical plants" by A.V. Valuev, A.A. Skorokhodov. Reviewed by V.D. Zemlianskov. Stal' 22 no.7:652 Jl '62. (MIRA 15:7)

(Steel industry--Accounting)
(Iron industry--Accounting)
(Valuev, A.V.) (Skorokhodov, A.A.)

ZEMLYANSKOV, V.D.; CHEPLANOV, V.I.

Improved indices of the state plan in ferrous metallurgy. Stal' 21 no.8:747-750 Ag '61. (MIRA 14:9)

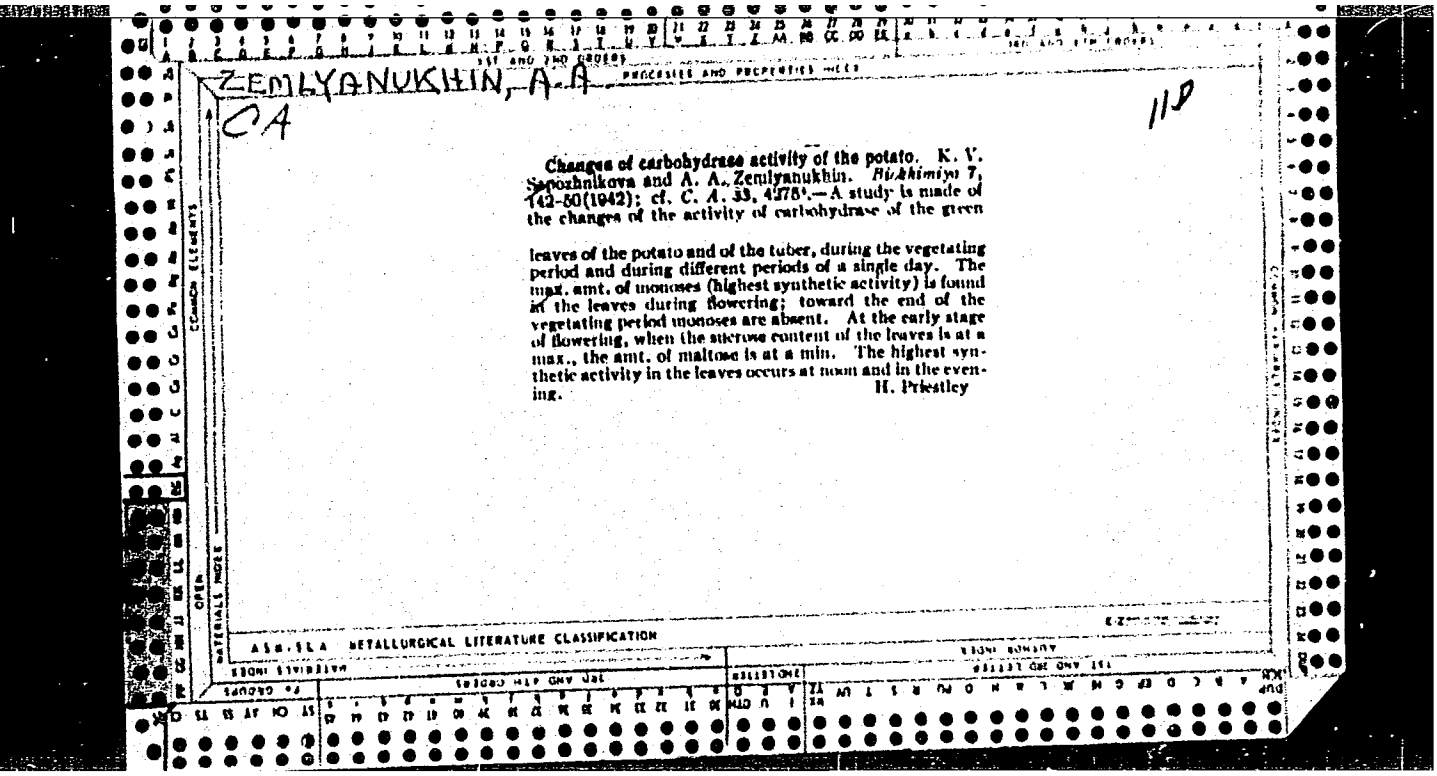
1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
(Metallurgical plants--Accounting)

ZEMLYANSKOV, V.D.; MAKAROV, M.P.

New developments in research. Stal' 25 no.10:956 O '65.
(MIRA 18:11)

ZEMLYANSKOV, V.D.; YUDINA, L.D.; SHITIKOVA, A.A.; PRIKHOD'KO, R.V.

Consumption of rolled ferrous metals in the U.S.S.R. during the current seven-year period. TSNIICHM no.45:143-153 '65.
(MIRA 18:9)



ZEMLYANUKHIN, A. A.

CA

11D

Changes of carbohydrase activity of the potato. K. V. Sapozhnikova and A. A. Zemlyanukhin. *Biokhimiya* 7, 142-50(1942); cf. *C. A.* 33, 4778⁹.—A study is made of the changes of the activity of carbohydrase of the green leaves of the potato and of the tuber, during the vegetating period and during different periods of a single day. The max. amt. of monoses (highest synthetic activity) is found in the leaves during flowering; toward the end of the vegetating period monoses are absent. At the early stage of flowering, when the sucrose content of the leaves is at a max., the amt. of maltose is at a min. The highest synthetic activity in the leaves occurs at noon and in the evening.

H. Priestley

A 54-54 METALLURGICAL LITERATURE CLASSIFICATION

ZEMLYANUKHIN, A.A.; SIMONOVA, R.V.

Effect of presowing treatment of cornseeds with succinic acid on the organic acid metabolism. Nauch. dokl. vys. shkoly; biol. nauki no.3:127-134 '64 (MIRA 17:8)

1. Rekomendovana kafedroy fiziologii rasteniy Voronezhskogo gosudarstvennogo universiteta.

ZEMLYANUKHIN, A.A.

Effect of ascorbic acid on water metabolism in plants. Fiziol. rast. 11 no.6:1047-1055 N-D '64. (MIRA 18:2)

1. Department of Plant Physiology, Voronezh University.

ZEMLYANUKHIN, A.A.; SHENSHINA, S.V.

Study of sex and its changes in hemp. Fiziol. rast. 8 no.2:213-219 '60. (MIRA 14:3)

1. Kadedra darvinizma i fiziologii rasteniy Voronezhskogo universiteta.
(Hemp) (Plants, Sex in)

ZEMLYANUKHIN, A.A.

Effect of mineral fertilizers on physiological and biochemical processes in corn. Fiziol.rast. 7 no.1:13-19 '60.
(MIRA 13:5)

1. Voronezh State University.
(Corn(Maize)--Fertilizers and manures)

COUNTRY	:	USSR
CATEGORY	:	Plant Physiology. Respiration and Metabolism. I
ABS. JOUR.	:	RZhBiol., No. 6 1959, No. 24497
AUTHOR	:	Zemlyanukhin, A. A.
INST.	:	Academy of Sciences, USSR
TITLE	:	The Influence of Irrigation on Plant Metabolism
ORIG. PUB.	:	Biol. osnovy. oroshayem. zemled., 1957, 552-564
ABSTRACT	:	Two-year experiments in irrigation by sprinkling of summer wheat Gordeiforme 10 and Beta vulgaris macrorhiza* were conducted in Voronezhskaya oblast'. Irrigation caused an increase of activity of catalases and peroxidases in the leaves and seeds of the wheat and in the leaves (especially the young leaves) of the beets, an increase in the content of ascorbic acid and sugars (especially glucoses) in the leaves of the wheat, and an increase in the rate of the flow of carbohydrates,

CARD: 1/2

*/ mangel-wurzel /

ZEMLYANUKHIN, A.A.

The morphophysiological characteristics of Agropyrum tenerum and A. fibrosum and their bearing on the introduction of the latter species into cultivation. Bot.zhur.42 no.2:230-239 F '57. (MLRA 10:3)

1. Voronezhskiy gosudarstvennyy universitet, Kafedra darvinizma.
(Wheat grass)

Seasonal changes of vitamin C contents of various plants. A. A. Zendyanukhin (State [illegible]) [illegible] MD

[illegible] and [illegible] of beets [illegible] ascorbic acid content was found [illegible] position on the plant and with its stage of growth [illegible] with environmental factors such as [illegible] and mineral content.

[illegible]

GOLITSYN, S.V., ZEMLYANUKHIN, A.A.

Some recent data on the chemical composition of chufa hay and tubers. Trudy VGU no.3:23-36 '58. (MIRA 13:8)
(Chufa)

ZEMLYANUKHIN, A.A.

Effect of irrigation on phosphorus metabolism in wheat. Trudy VGU no.3:27-32 '58. (MIRA 13:8)
(Wheat--Irrigation) (Phosphorus metabolism)

ZEMLYANUKHIN, A.A.

Effect of irrigation on the biochemical activity of the soil and plants. Trudy VGU 56 no.1:13-16 '59. (MIRA 13:8)
(Irrigation) (Biochemistry)

ZEMLYANUKHIN A.A.

USSR/Plant Physiology. Respiration and Metabolism I-2

Abs Jour : Ref Zhur - Biol., No 19, 1958, No 86624

Author : Zemlyanukhin A.A.
Inst : Soc of Naturalists, Voronezh University
Title : The Effect of Soil Humidity on Metabolism in Pea Seedlings

Orig Pub : Byul. Obshchestva Yestestvoispyt. pri Voronezhsk. Un-te, 10, 35-37, 1956

Abstract : Vegetation experiments were conducted on pea of the Ramonskiy-77 variety for soils with differeing humidity - 70 to 20 percent of the total moisture capacity. An increase in soil humidity involved an increase in the growth and the dry and natural weight of the plant and a pronounced increase in the content of ascorbic acid (3.5-fold greater content of that acid at a 70-percent humidity of the soil compared with 20-percent humidity), increase in the content of saccharose and particularly glucose, and rise in the accumulation of P (by approximately 30% compared with original content). It is

Card : 1/2

ZEMLYANUKHIN, A.A.

Amount of moisture in leaves in relation to the individual growth of plants. Dokl. akad. sel'khoz. 23 no.9:14-16 '58. (MIRA 11:10)

1.Voronezhskiy gosudarstvennyy universitet. Predstavlena akademikom I.V. Yakushkinym.
(Plants--Absorption of water) (Leaves (Botany))

ZEMLYANUKHIN, A. A., (USSR)

"Ascorbic Acid and Acids from the Di- and Tri-Carboxylic Acid Cycle as Metabolism Activators.

Report presented at the 5th Int'l. Biochemistry Congress, Moscow, 10-16 Aug 1961.

ZEMLYANUKHIN, A.A.

Physiological characteristics of two Voronezh varieties of corn. Nauch.zap.Vor.otd.VBO za:23-26 '64.

(MIRA 18:11)

ZEMLYANUKHIN, A.A.; ALEKSEYEVA, O.V.

Diurnal dynamics of organic acid content in the leaves of sunflower. Nauch. dokl. vys. shkoly; biol. nauki no.1:176-181 '66. (MIRA 19:1)

1. Rekomendovana kafedroy fiziologii rasteniy Voronezhskogo gosudarstvennogo universiteta. Submitted November 27, 1964.

VEYSBERG, K.G., inzh.; NADTOCHIY, A.P., inzh.; ZEMLYANUKHIN, A.G., inzh.; TOV, S.M., inzh.

Feeding of mine face mechanisms in development workings by means of a common cable. Ugol.prom. no.5:70-72 S-O '62. (MIRA 15:11)

1. Giproniselektroshakht.
(Coal mining machinery--Electric driving)

ZEMLYANUKHIN, S.Ya.

Determining the second frequency of natural vibrations of a spindle in internal grinding machines. Stan.i instr. 31 no.8:32-33 Ag '60. (MIRA 13:8)
(Grinding machines—Vibrations)

ZEMLYANUKHIN, S.Ya., inzh.

Determining critical speeds of bracket shafts. Vest.mash. 42 no.1:28-31 Ja '62. (MIRA 15:1)
(Shafting--Testing)

VDOVENKO, V.M.; ZEMLYANUKHIN, V.I.

Ratio of the quantitative distribution of uranyl nitrate and water in ether solutions saturated with water. Trudy Radiev. inst.AN SSSR. 8:30-37 '58. (MIRA 12:2)
(Uranyl nitrate) (Ethyl ether)

5(4). SOV/78-4-2-23/40

AUTHORS: Ryskin, Ya. I., Zemlyanukhin, V. I., Solov'yeva, A. A. Derbeneva, N. A.

TITLE: Investigation of the State of Water in Anhydrous Solutions of Uranylnitrate by the Method of Infrared Spectroscopy (Izucheniye sostoyaniya vody v nevodnykh rastvorakh uranil-nitrata metodom infrakrasnoy spektroskopii)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 2, pp 393-396 (USSR)

ABSTRACT: The paper under discussion describes the investigation of the state of water in anhydrous solutions of uranylnitrate by infrared spectroscopy. The following frequencies of the water spectrum were used in the determinations: frequency of the deformation vibration $\nu_2 = 1645\ cm^{-1}$ ($\lambda = 6.1\mu$), $(\nu_1 + \nu_3) = 6882\ cm^{-1}$ ($\lambda = 1.45\mu$) and $(\nu_2 + \nu_3) = 5110\ cm^{-1}$ ($\lambda = 1.96\mu$). ν_1... frequency of the symmetrical valence vibration of the water molecule; ν_3... frequency of the asymmetrical valence vibration of the water molecule.

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SOV/78-4-2-23/40

Investigation of the State of Water in Anhydrous Solutions of Uranylnitrate by the Method of Infrared Spectroscopy

The spectra were recorded on the infrared spectrometer D-209 by quartz and NaCl-prisms. The solutions to be examined were produced by the dilution of hexa, tri, and dihydrates of uranylnitrate in suitable solvents, as ether, acetone, and methylethylketone. The infrared absorption spectra of the hexa, tri, and dihydrates of uranylnitrate in ether were recorded in the zone 1.3-2.2μ. The results show that two molecules of water are complexly bound in uranylnitrate and are considerably deformed. The deformation degree depends on the nature of the solvent. The remaining water molecules of uranylnitrate in organic solvents are bound less complexly to uranylnitrate and show a comparatively slight degree of deformation. The spectra of uranylnitrate in acetone and methylethylketone show analogous phenomena. There are 4 figures and 5 references, 2 of which are Soviet.

SUBMITTED: December 12, 1957

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26603
S/186/61/003/004/002/007
E141/E164

21.4200

AUTHORS: Zemlyanukhin, V.I., and Savoskina, G.P.

TITLE: The extraction of Americium with Tributyl Phosphate

PERIODICAL: Radiokhimiya, 1961, Vol.3, No.4, pp. 411-416

TEXT: The authors carried out investigations on the extraction of Am from HNO_3 solutions. Quantities of Am (< 0.1 mg/ℓ) containing not more than 2% of other α-emitters were extracted in cylinders at room temperature 20 ± 2° . The tributyl phosphate was first washed with a 5% NaCl solution, then with water and distilled under vacuum; concentrated HNO_3 was prepared according to the Erdman method (Ref.7: Yu.V. Karyakin, Chistyye khimicheskiye reaktivy "Pure chemical reagents", 233. Goskhimizdat, M.,(1947)). The Am-content in both organic and aqueous phase was determined radiometrically; the concentration of HNO_3 by volumetric titration with alkali with methyl orange. The coefficient of distribution α_{Am} was calculated as the ratio of the equilibrium concentration of Am in the organic and aqueous phase. It was found that the coefficient of distribution of Am, in the presence of non-extracted nitrates increases with increasing concentration of nitrate and

The extraction of Americium with S/186/61/003/004/002/007
E141/E164

decreases on increasing the concentration of HNO_3. The authors also calculated the equivalents of salting-out of a number of nitrates and found that the degree of extraction of Am increases on raising the ion-potential of the cation and the coefficients of activity of Am we well as that of the salting-out agent. Investigations on the mechanism of distribution of Am indicate that complexes of the type $Am(NO_3)_3 \cdot n(TBP.m\ HNO_3)$ are formed in the organic phase during extraction from very acidic solutions ($HNO_3 > 8M$) and that no stable complexes of Am are formed with HNO_3 in aqueous solutions. At high concentrations of the nitrate it was observed that the curves of the coefficients of activity are approximately parallel and are only slightly affected by J (J = ionic strength) of the solution. Average values of the equivalents of salting-out of nitrate of monovalent cations in the relation to 1M $LiNO_3$ and coefficients of activity of Am in the salting-out agent when J = 4 are given, see Table 5. It can be seen that the salting-out effect is greater the higher the coefficient of activity of Am and of the salting-out agent, which

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5 3630

43313
S/186/62/004/005/005/009
E075/E135

AUTHORS: Zemlyanukhin, V.I., Savoskina, G.P., and Pushlenkov, M.F.

TITLE: Investigation of the complex formation of americium with neutral phosphoroorganic compounds. I.

PERIODICAL: Radiokhimiya, v.4, no.5, 1962, 570-575

TEXT: The authors investigated the extraction of Am with tri-n-butylphosphate (TBP), di-n-butyl ester of n-butylphosphorous acid (DBEBP), n-butyl ester of di-n-butyl phosphorous acid (BEDBP) and tri-n-butylphosphine oxide (TBPO). This was done in view of the lack of data in the literature on the extraction of trivalent elements with neutral P compounds, with the exception of tributyl and trioctylphosphates (TBP and TOP). Am was used in quantities below 0.1 mg/litre dissolved in 5M $NaNO_3$. Kerosene was used as diluent for the extractants. The procedure used was described previously (V.I. Zemlyanukhin and G.P. Savoskina, Radiokhimiya, v.3, no.4, 1961, 411). The extraction of Am increases when TBP is replaced by TBPO. When the concentration of the latter is above 0.01 M a third phase is formed. The distribution coefficients (α_{Am}) increase rapidly with the concentration of HNO_3

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and reach maximum values (2.16 and 13.3 for DBEBP and BEDBP respectively) in approximately 2M HNO_3. In general, $Am(NO_3)_3$ interacts with the extractants (T):

$$Am^{3+} + 3\ NO_3^- + 3T \rightleftarrows Am(NO_3)_3 \cdot 3T \qquad (1)$$

The equilibrium constants for this reaction are:
$K_{TBP} = 0.4$; $K_{DBEBP} = 7.4$; $K_{BEDBP} = 112$; $K_{TBPO} = 1780$.
The activity coefficients of Am decrease with the increasing concentration of HNO_3, the departure from ideality increasing in the order TBP, DBEBP, BEDBP, TBPO.
There are 7 figures and 3 tables.

SUBMITTED: July 7, 1961.

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S/186/62/004/006/003/009
E075/E433

AUTHORS: Zemlyanukhin, V.I., Savoskina, G.P., Pushlenkov, M.F.

TITLE: A study of the formation of complex compounds of americium with diisoamyl ester of methylphosphinic acid (DAMP)

PERIODICAL: Radiokhimiya, v.4, no.6, 1962, 655-660

TEXT: The results of the experimental extraction of americium with DAMP from nitric, perchloric, hydrochloric, sulphuric and acetic acid solutions are described. The ^{241}Am used contained no more than 2% of admixtures emitting α radiation. It was shown that the formation of complexes of americium with DAMP follows the same relationships as the formation of complexes with tributylphosphate. Americium is comparatively well extractable with DAMP from nitric and perchlorate solutions and weakly extractable from hydrochloric, sulphuric and acetic solutions. From nitric and perchlorate solutions americium is extracted in the form of $Am(NO_3)_3 \cdot 3DAMP$, the constant for which was calculated (k = 8.3). There are 5 figures and 4 tables.

SUBMITTED: September 9, 1961

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ZEMLYANUKHIN, V.I.; SAVOSKINA, G.P.; PUSHILENKOV, M.F.

Complex formation of americium with acid organophosphrus compounds. Radiokhimiia 5 no. 6:674-679 '63.

(MIRA 17:7)

ZEMLYANUKHIN, V.I.; SAVOSKINA, G.P.; PUSHLENKOV, M.F.

Complex formation of americium with neutral organophosphorus compounds. Part 2. Radiokhimiia 6 no.6:694-701 '64.
(MIRA 18:2)

ZELENETSKIY, N.N.; ZEMLYANUKHINA, M.P.

Checking the performance of industrial packed vacuum-rectification apparatus. Trudy VNIISNDV no.6:141-146 '63. (MIRA 17:4)

ZELENETSKIY, N.N.; ZEMLYANUKHINA, M.P.

Rectification of guaiacol, obtained by methylation of mixtures containing pyrocatechin. Trudy VNIISNDV no.5:98-102 '61.
(MIRA 14:10)

(Guaiacol) (Methylation). (Pyrocatechol)

SAVICH-ZABLOTSKIY, B.K. [Savych-Zablots'kyi, B.K.], inzh.-elektrik;
ZEMLYANYY, I.M. [Zemlianyi, I.M.], inzh.-elektrik

Operating transformers with automatic tension regulation. Mekh. sil'. hosp. 11 no.5:23-24 My '60. (MIRA 14:5)
(Electric transformers)

KAZANTSEV, Yevgeniy Ivanovich. Prinimali uchastiye: ZEMLYANYY, N.G., inzh.; KATSEN, L.G., kand. tekhn. nauk; SEMIKIN, I.D., prof., retsenzent; STEPANOV, Ye.S., red.; SHKLOVSKAYA, I.Yu., red.izd-va; KOROVINA, N.A., tekhn.red.

[Industrial furnaces; handbook for their calculation and design] Promyshlennye pechi; spravochnoe rukovodstvo dlia raschetov i proektirovaniia. Moskva, Izd-vo "Metallurgiia," 1964. 451 p. (MIRA 17:4)

1. Dnepropetrovskiy metallurgicheskiy institut (for Semikin).